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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,606	06/27/2005	Toshiaki Takenaka	MAT-8716US	9266
23122	7590	11/17/2008	EXAMINER	
RATNERPRESTIA P.O. BOX 980 VALLEY FORGE, PA 19482			TALBOT, BRIAN K	
			ART UNIT	PAPER NUMBER
			1792	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/540,606

Applicant(s)

TAKENAKA ET AL.

Examiner

Brian K. Talbot

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2008.
2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
4a) Of the above claim(s) 17-22 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-16 and 23-35 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 27 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SF/08)
Paper No(s)/Mail Date 6/27/05
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

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1. Applicant's election without traverse of Group I, claims 1-16 and 23-35 in the reply filed on 8/26/08 is acknowledged. Claims 17-22 are withdrawn from prosecution as being directed toward a non-elected invention and should be canceled in response to this Office Action.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-15 and 23-34 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The step of cleaning the edge of the squeegee by using the squeegee part while reciprocating the squeegee to fill the holes is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1,2 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 2, the step of forming a through-hole is unclear. It is unclear as to the through hole being that of the mask film or that of the substrate as well as when the through hole is formed, i.e. prior to applying mask film or after?

Clarification is requested.

Regarding claim 4, the term "hound's tooth" is vague and indefinite as to what is encompassed. Clarification is requested.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Takenaka et al. (JP 2001-213,064).

Takenaka et al. (JP 2001-213,064) teaches a printing plate and printing method whereby a process comprises passing a squeegee onto an inclined part of a paste removing part (3) provided on a mask (2) before the printing pattern or paste filling (abstract and fig. 1).

Claims 1,3 and 5 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kuroki et al. (JP 57-103862).

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Kuroki et al. (JP 57-103862) teaches a screen printing plate for filling conductor whereby the solid metal screen having a concavo-convex pattern formed at a side where a squeegee starts to move, of a periphery of a printing pattern of the screen printing plate (abstract and Figs. 4,5).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not

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commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 2,5,7-16,23,24 and 26-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over (a) Kuroki et al. (JP 57-103862) alone or (b) Takenaka et al. (JP 2001-213,064) in combination with Kuroki et al. (JP 57-103862).

Features detailed above concerning Takenaka et al. (JP 2001-213,064) and/or Kuroki et al. (JP 57-103862) are incorporated here.

Takenaka et al. (JP 2001-213,064) and/or Kuroki et al. (JP 57-103862) fail to teach masking both sides (claim 2), forming the cleaning part in the shape of a hound's tooth (claim 4), forming the groove (cleaning part) (claims 8-12,27-31) and the compositional make-up of the substrate having the holes to be filled (claims 13-15,32-34).

While the Examiner acknowledges the references are silent with respect to these limitations, it is the Examiner's position that these are all "result effective variables" which are within the skill of one practicing in the art and would have been an obvious modification of the art absent a showing of unexpected results garnered directly from the claimed limitations.

No such showing has been supplied to support that the shape of the hole cleaning part, the method of producing the hole cleaning part or the substrate to which the paste is supplied has any criticality to producing the expected result, i.e. cleaning paste material

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from the squeegee as it passes. Upon such a showing, the Examiner will reconsider his position.

10. Claims 6 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over (a) Kuroki et al. (JP 57-103862) alone or (b) Takenaka et al. (JP 2001-213,064) in combination with Kuroki et al. (JP 57-103862) further in combination with Kozo et al. (JP 2001-7514).

Features detailed above concerning (a) Kuroki et al. (JP 57-103862) alone or (b) Takenaka et al. (JP 2001-213,064) in combination with Kuroki et al. (JP 57-103862) are incorporated here.

(a) Kuroki et al. (JP 57-103862) alone or (b) Takenaka et al. (JP 2001-213,064) in combination with Kuroki et al. (JP 57-103862) fail to teach a plurality of holes (squeegee cleaning parts).

Kozo et al. (JP 2001-7514) teaches production of wiring board whereby through holes (3) are filled with paste (10) while dummy area holes (9) surround the printing area (2) having the through holes (3).

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified (a) Kuroki et al. (JP 57-103862) alone or (b) Takenaka et al. (JP 2001-213,064) in combination with Kuroki et al. (JP 57-103862) printing plate to include a plurality of holes as evidenced by Kozo et al. (JP 2001-7514) with the expectation of achieving similar success, i.e. removing paste from squeegee.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K. Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 8AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brian K Talbot/
Primary Examiner, Art Unit 1792

BKT

